ABSTRACT OF THE INVENTION:

Methods and systems for constructing multi-sector antenna for packet-by-packet transmission. The transmission of each packet can be performed by a different antenna sector. The system can consist of a plurality of various antenna types: flat panel, parabolic dish, slotted, omni, planar, micro-strip, Yagi, beam-forming, adaptive, and electro-mechanical moveable. The direction of transmission is selected responsive to the direction in which the best signal reception was received. Switching logic is coupling the out going transmission signal to selected ones from the plurality of the antenna sectors. The antenna design in this invention is aimed at increasing the gain and minimizing the interfering signals with respect large number of users who are concurrently and continuously tracking and communicating with their access points, and consequently, increasing the bit rate of each transmission and the aggregate capacity of the wireless system.